

Remarks

Claims 23-26, 28-37, 39, 40 and 42-56 remain pending in this application.

Claims 23 and 39 have been amended to incorporate a reference to a broadband signal. Basis for the amendment can be found in the specification which refers to CDMA technology. The signals for CDMA are inherently broadband because the transmitted bandwidth is much broader than the information bandwidth. Further basis can be found in the specification on page 5 line 11 which explicitly refers to the "spread bandwidth" of the signal.

In the Advisory Action the Examiner argues that phase shifting a signal is equivalent to delaying it. The Applicants acknowledge that this is indeed true for a narrow band signal which is essentially at a single frequency and the relationship between time delay τ and phase delay ϕ (in degrees) is given by the following equation:

$$\tau = \phi / (360 \times f)$$

Where f is the frequency of the signal.

In the present application as clarified by the amendments of independent claims 23 and 39 the invention relates to broadband signals. These signals have a specified bandwidth which describes the range of frequencies within the signal. For a broadband signal there is no longer a direct correlation between a time delay and a change in phase because there are many frequencies within the signal. A given time delay will therefore result in a different phase change for each of the constituent frequencies within the broadband signal.

The Applicants therefore respectfully submit that a phase shifter is not equivalent to "a delay element in at least one of said receive paths" (this application, claim 23) because a phase shifter as described in Lindemeier and a delay element perform different operations when used on a broadband signal. Consequently the present invention as defined by claim 23 is clearly not anticipated by Lindemeier and the

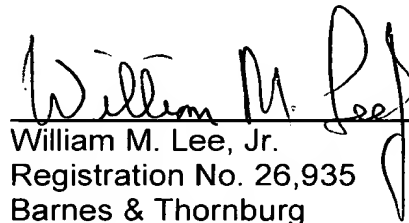
Applicants respectfully submit that the rejection of claim 23 under 35 U.S.C. §102(b) cannot now be sustained.

Furthermore, Lindemeier highlights that the phase shifters in his device cannot be replaced with delay elements as these delays would be problematic in his receiving system for television signals because they lead to ghost images and therefore should be avoided (Lindemeier, column 1 lines 47-50). Lindemeier therefore teaches away from the present invention in teaching that delays in the signals should be avoided.

In view of the fact that all of the Examiner's comments in the Advisory Action have been addressed, further and favorable reconsideration is respectfully solicited.

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Respectfully submitted,

A handwritten signature in dark ink, appearing to read "William M. Lee, Jr.", is written over a horizontal line. The signature is fluid and cursive.

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